

## WEST Search History

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<i>DB=PGPB,USPT,EPAB,JPAB,DWPI; PLUR=YES; OP=OR</i>			
<input type="checkbox"/>	L4	L1 and (Walker or Ripmeester or Zeng).in.	4
<input type="checkbox"/>	L3	l2 and protein\$4	9
<input type="checkbox"/>	L2	L1 same (freez\$4 or antifree\$4)	57
<input type="checkbox"/>	L1	clathrat\$4 same hydrat\$4	1211

END OF SEARCH HISTORY

=> d his full

(FILE 'HOME' ENTERED AT 13:04:59 ON 20 MAR 2007)

INDEX 'ADISCTI, ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, ANTE, AQUALINE, AQUASCI, BIOENG, BIOSIS, BIOTECHABS, BIOTECHDS, BIOTECHNO, CABA, CAPLUS, CEABA-VTB, CIN, CONFSCI, CROPB, CROPU, DDFB, DDFU, DGENE, DISSABS, DRUGB, DRUGMONOG2, DRUGU, EMBAL, EMBASE, ...' ENTERED AT 13:05:22 ON 20 MAR 2007

SEA (CLATHRAT?(S)HYDRAT?) OR (GAS?(S)HYDRATE?)

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4 FILE ADISCTI  
3 FILE ADISINSIGHT  
11 FILE ADISNEWS  
54 FILE AGRICOLA  
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129 FILE ANTE  
45 FILE AQUALINE  
804 FILE AQUASCI  
57 FILE BIOENG  
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110 FILE DGENE  
282 FILE DISSABS  
64 FILE DRUGB  
180 FILE DRUGU  
7 FILE EMBAL  
343 FILE EMBASE  
418 FILE ESBIODBASE  
37 FILE FROSTI  
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694 FILE GENBANK  
17 FILE HEALSAFE  
2074 FILE IFIPAT  
1123 FILE JICST-EPLUS  
2 FILE KOSMET  
140 FILE LIFESCI  
304 FILE MEDLINE  
656 FILE NTIS  
400 FILE OCEAN  
2601 FILE PASCAL  
1 FILE PHAR  
2 FILE PHARMAML  
5 FILE PHIN  
728 FILE PROMT  
54 FILE RDISCLOSURE  
3212 FILE SCISEARCH  
913 FILE TOXCENTER  
11086 FILE USPATFULL  
1308 FILE USPAT2  
11 FILE VETB  
24 FILE VETU  
123 FILE WATER  
4473 FILE WPIDS  
31 FILE WPIFV  
4473 FILE WPINDEX  
31 FILE IPA  
358 FILE NLDB

L1        QUE (CLATHRAT?(S) HYDRAT?) OR (GAS?(S) HYDRATE?)

      D RANK

FILE 'USPATFULL, CAPLUS, WPIDS, SCISEARCH, PASCAL, IFIPAT, USPAT2,  
JICST-EPLUS, TOXCENTER, AQUASCI, PROMT, ESBIODBASE, OCEAN, BIOSIS, NLDB,  
EMBASE, MEDLINE' ENTERED AT 13:11:48 ON 20 MAR 2007

L2        39907 SEA (CLATHRAT?(S) HYDRAT?) OR (GAS?(S) HYDRATE?)

L3        941 SEA L2 (S)(FREEZ? OR ANTIFREE?)

L4        34 SEA L3 (S)(PROTEI? OR POLYPEPT?)

L5        129 SEA L3 AND (PROTEI? OR POLYPEPT?)

L6        105 DUP REM L5 (24 DUPLICATES REMOVED)

      D TI L6 1-105

      D IBIB ABS L6 1 5 11-14 17 25 39 40 47 73 86 87 93

      D KWIC L6 87 73 40 13 1 17

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NEWS 2 "Ask CAS" for self-help around the clock  
NEWS 3 DEC 18 CA/CAPplus pre-1967 chemical substance index entries enhanced  
with preparation role  
NEWS 4 DEC 18 CA/CAPplus patent kind codes updated  
NEWS 5 DEC 18 MARPAT to CA/CAPplus accession number crossover limit increased  
to 50,000  
NEWS 6 DEC 18 MEDLINE updated in preparation for 2007 reload  
NEWS 7 DEC 27 CA/CAPplus enhanced with more pre-1907 records  
NEWS 8 JAN 08 CHEMLIST enhanced with New Zealand Inventory of Chemicals  
NEWS 9 JAN 16 CA/CAPplus Company Name Thesaurus enhanced and reloaded  
NEWS 10 JAN 16 IPC version 2007.01 thesaurus available on STN  
NEWS 11 JAN 16 WPIDS/WPINDEX/WPIX enhanced with IPC 8 reclassification data  
NEWS 12 JAN 22 CA/CAPplus updated with revised CAS roles  
NEWS 13 JAN 22 CA/CAPplus enhanced with patent applications from India  
NEWS 14 JAN 29 PHAR reloaded with new search and display fields  
NEWS 15 JAN 29 CAS Registry Number crossover limit increased to 300,000 in  
multiple databases  
NEWS 16 FEB 15 PATDPASPC enhanced with Drug Approval numbers  
NEWS 17 FEB 15 RUSSIAPAT enhanced with pre-1994 records  
NEWS 18 FEB 23 KOREAPAT enhanced with IPC 8 features and functionality  
NEWS 19 FEB 26 MEDLINE reloaded with enhancements  
NEWS 20 FEB 26 EMBASE enhanced with Clinical Trial Number field  
NEWS 21 FEB 26 TOXCENTER enhanced with reloaded MEDLINE  
NEWS 22 FEB 26 IFICDB/IFIPAT/IFIUDB reloaded with enhancements  
NEWS 23 FEB 26 CAS Registry Number crossover limit increased from 10,000  
to 300,000 in multiple databases  
NEWS 24 MAR 15 WPIDS/WPIX enhanced with new FRAGHITSTR display format  
NEWS 25 MAR 16 CASREACT coverage extended  
NEWS 26 MAR 20 MARPAT now updated daily  
  
NEWS EXPRESS NOVEMBER 10 CURRENT WINDOWS VERSION IS V8.01c, CURRENT  
MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),  
AND CURRENT DISCOVER FILE IS DATED 25 SEPTEMBER 2006.  
  
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FILE 'HOME' ENTERED AT 13:04:59 ON 20 MAR 2007

=> index bioscience medicine

FILE 'DRUGMONOG' ACCESS NOT AUTHORIZED

COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
0.21	0.21

FULL ESTIMATED COST

INDEX 'ADISCTI, ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, ANTE, AQUALINE, AQUASCI, BIOENG, BIOSIS, BIOTECHABS, BIOTECHDS, BIOTECHNO, CABA, CAPLUS, CEABA-VTB, CIN, CONFSCI, CROPB, CROPU, DDFB, DDFU, DGENE, DISSABS, DRUGB, DRUGMONOG2, DRUGU, EMBAL, EMBASE, ...' ENTERED AT 13:05:22 ON 20 MAR 2007

71 FILES IN THE FILE LIST IN STNINDEX

Enter SET DETAIL ON to see search term postings or to view search error messages that display as 0\* with SET DETAIL OFF.

=> s (clathrat?(s)hydrat?) or (gas?(s)hydrate?)

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- 3 FILE ADISINSIGHT
- 11 FILE ADISNEWS
- 54 FILE AGRICOLA
- 103 FILE ANABSTR
- 129 FILE ANTE
- 45 FILE AQUALINE
- 804 FILE AQUASCI
- 57 FILE BIOENG
- 375 FILE BIOSIS
- 67 FILE BIOTECHABS
- 67 FILE BIOTECHDS
- 82 FILE BIOTECHNO
- 180 FILE CABA
- 9387 FILE CAPLUS
- 483 FILE CEABA-VTB

16 FILES SEARCHED...

- 70 FILE CIN
- 481 FILE CONFSCI
- 2 FILE CROPB
- 4 FILE CROPU
- 64 FILE DDFB
- 79 FILE DDFU
- 110 FILE DGENE
- 282 FILE DISSABS
- 64 FILE DRUGB
- 180 FILE DRUGU
- 7 FILE EMBAL
- 343 FILE EMBASE
- 418 FILE ESBIODBASE

31 FILES SEARCHED...

- 37 FILE FROSTI
- 63 FILE FSTA
- 694 FILE GENBANK
- 17 FILE HEALSAFE
- 2074 FILE IFIPAT
- 1123 FILE JICST-EPLUS
- 2 FILE KOSMET
- 140 FILE LIFESCI
- 304 FILE MEDLINE
- 656 FILE NTIS

46 FILES SEARCHED...

- 400 FILE OCEAN
- 2601 FILE PASCAL

1 FILE PHAR  
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58 FILES HAVE ONE OR MORE ANSWERS, 71 FILES SEARCHED IN STNINDEX

L1 QUE (CLATHRAT?(S) HYDRAT?) OR (GAS?(S) HYDRATE?)

=> d rank

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F2	9387	CAPLUS
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F18	400	OCEAN
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F23	282	DISSABS
F24	180	CABA
F25	180	DRUGU
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F27	129	ANTE
F28	123	WATER
F29	110	DGENE
F30	103	ANABSTR
F31	82	BIOTECHNO
F32	79	DDFU
F33	70	CIN
F34	67	BIOTECHABS
F35	67	BIOTECHDS
F36	64	DDFB
F37	64	DRUGB
F38	63	FSTA
F39	57	BIOENG
F40	54	AGRICOLA
F41	54	RDISCLOSURE

F42	45	AQUALINE
F43	37	FROSTI
F44	31	WPIFV
F45	31	IPA
F46	24	VETU
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F48	11	ADISNEWS
F49	11	VETB
F50	7	EMBAL
F51	5	PHIN
F52	4	ADISCTI
F53	4	CROPU
F54	3	ADISINSIGHT
F55	2	CROPB
F56	2	KOSMET
F57	2	PHARMAML
F58	1	PHAR

=> file f1-f12, f17-f22

COST IN U.S. DOLLARS

SINCE FILE

ENTRY

TOTAL

SESSION

FULL ESTIMATED COST

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7.14

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=> s (clathrat?(s)hydrat?) or (gas?(s)hydrate?)

12 FILES SEARCHED...

L2 39907 (CLATHRAT?(S) HYDRAT?) OR (GAS?(S) HYDRATE?)

=> s 12 (s)(freez? or antifree?)

L3 941 L2 (S)(FREEZ? OR ANTIFREE?)

=> s 13 (s)(protei? or polypept?)

12 FILES SEARCHED...

L4 34 L3 (S)(PROTEI? OR POLYPEPT?)

=> s 13 and (protei? or polypept?)

L5 129 L3 AND (PROTEI? OR POLYPEPT?)

=> dup rem 15

PROCESSING COMPLETED FOR L5

L6 105 DUP REM L5 (24 DUPLICATES REMOVED)

=> d ti 16 1-105

L6 ANSWER 1 OF 105 USPATFULL on STN

TI Environmentally benign anti-icing or deicing fluids

L6 ANSWER 2 OF 105 USPATFULL on STN

TI Barrier units and articles made therefrom

L6 ANSWER 3 OF 105 USPATFULL on STN

TI Liposome loading with metal ions

L6 ANSWER 4 OF 105 USPATFULL on STN

TI Powder formation by atmospheric spray-freeze drying

L6 ANSWER 5 OF 105 USPATFULL on STN

TI Shale Inhibition additive for oil/gas down hole fluids and methods for making and using same

L6 ANSWER 6 OF 105 USPATFULL on STN

TI Freeze-drying microscope stage apparatus and process of using the same

L6 ANSWER 7 OF 105 USPATFULL on STN

TI Deep water completions fracturing fluid compositions

L6 ANSWER 8 OF 105 USPATFULL on STN

TI Liposomal formulations comprising dihydrosphingomyelin and methods of use thereof

L6 ANSWER 9 OF 105 WPIDS COPYRIGHT 2007

THE THOMSON CORP on STN



TI Wound dressing composition, useful to deliver wound healing agents (e.g. alpha-1-antichymotrypsin) for the treatment of e.g. neuropathic ulcers, diabetic ulcers and infected wounds, comprises a cellulose ether and a gellan gum

L6 ANSWER 10 OF 105 WPIDS COPYRIGHT 2007 THE THOMSON CORP on STN

TI Identifying therapeutically active antibodies for cancer or autoimmune disorder therapy, comprises formulating a multivalent antibody construct, measuring therapeutic activity, and comparing activity of construct to antibodies in free form

L6 ANSWER 11 OF 105 CAPLUS COPYRIGHT 2007 ACS on STN DUPLICATE 1

TI Effect of antifreeze protein on nucleation, growth and memory of gas hydrates

L6 ANSWER 12 OF 105 CAPLUS COPYRIGHT 2007 ACS on STN DUPLICATE 2

TI Effect of Antifreeze Proteins on the Nucleation, Growth, and the Memory Effect during Tetrahydrofuran Clathrate Hydrate Formation

L6 ANSWER 13 OF 105 USPATFULL on STN DUPLICATE 3

TI Environmentally benign anti-icing or deicing fluids

L6 ANSWER 14 OF 105 USPATFULL on STN DUPLICATE 4

TI Antifreeze proteins for inhibition of clathrate hydrate formation and reformation

L6 ANSWER 15 OF 105 USPATFULL on STN DUPLICATE 5

TI Powder formation by atmospheric spray-freeze drying

L6 ANSWER 16 OF 105 USPATFULL on STN DUPLICATE 6

TI Ultrasound imaging and treatment

L6 ANSWER 17 OF 105 USPATFULL on STN DUPLICATE 7

TI Well drilling method and drilling fluid

L6 ANSWER 18 OF 105 USPATFULL on STN

TI Methods of preparing gaseous precursor-filled microspheres

L6 ANSWER 19 OF 105 USPATFULL on STN

TI Methods and compositions using immunomodulatory compounds for the treatment and management of central nervous system disorders or diseases

L6 ANSWER 20 OF 105 USPATFULL on STN

TI Lipid carrier compositions with enhanced blood stability

L6 ANSWER 21 OF 105 USPATFULL on STN

TI Cell penetrating therapeutic agents

L6 ANSWER 22 OF 105 USPATFULL on STN

TI Novel targeted compositions for diagnostic and therapeutic use

L6 ANSWER 23 OF 105 WPIDS COPYRIGHT 2007 THE THOMSON CORP on STN

TI Cementitious composition, useful as water reducing agents for modifying hydratable cementitious materials, comprises a hydratable cementitious binder and a composition comprising a lignosulfonic acid, a gluconic acid and a xylonic acid

L6 ANSWER 24 OF 105 CAPLUS COPYRIGHT 2007 ACS on STN

TI Water structuring in phase transitions and in chemical reactions at sulfur sites in proteins

L6 ANSWER 25 OF 105 CAPLUS COPYRIGHT 2007 ACS on STN

TI	Inhibition of clathrate hydrates by antifreeze proteins	
L6	ANSWER 26 OF 105	USPATFULL on STN DUPLICATE 8
TI	Liposomal phosphodiester, phosphorothioate, and p-ethoxy oligonucleotides	
L6	ANSWER 27 OF 105	USPATFULL on STN
TI	Non-invasive intravascular thrombolysis using modified ultrasound techniques	
L6	ANSWER 28 OF 105	USPATFULL on STN
TI	Expandable gastric retention device	
L6	ANSWER 29 OF 105	USPATFULL on STN
TI	Cationic lipids and use thereof	
L6	ANSWER 30 OF 105	USPATFULL on STN
TI	Methods of using and compositions comprising selective cytokine inhibitory drugs for the treatment and management of disorders of the central nervous system	
L6	ANSWER 31 OF 105	USPATFULL on STN
TI	Methods and compositions for blood pool identification, drug distribution quantification and drug release verification	
L6	ANSWER 32 OF 105	USPATFULL on STN
TI	Desalination of ocean water	
L6	ANSWER 33 OF 105	USPATFULL on STN
TI	Multi-test assembly for evaluating, detecting and monitoring processes at elevated pressure	
L6	ANSWER 34 OF 105	USPATFULL on STN DUPLICATE 9
TI	Comonomer compositions for production of imide-containing polyamino acids	
L6	ANSWER 35 OF 105	USPATFULL on STN DUPLICATE 10
TI	Comonomer compositions for production of imide-containing polyamino acids	
L6	ANSWER 36 OF 105	USPATFULL on STN DUPLICATE 11
TI	Comonomer compositions for production of imide-containing polyamino acids	
L6	ANSWER 37 OF 105	USPATFULL on STN DUPLICATE 12
TI	NON-INVASIVE METHODS FOR SURGERY IN THE VASCULATURE	
L6	ANSWER 38 OF 105	USPATFULL on STN DUPLICATE 13
TI	Novel therapeutic delivery systems	
L6	ANSWER 39 OF 105	CAPLUS COPYRIGHT 2007 ACS on STN DUPLICATE 14
TI	Use of antifreeze proteins for inhibition of clathrate hydrate formation and reformation	
L6	ANSWER 40 OF 105	USPATFULL on STN
TI	Environmentally benign anti-icing or deicing fluids	
L6	ANSWER 41 OF 105	USPATFULL on STN
TI	Novel methods of imaging and treatment with targeted compositions	
L6	ANSWER 42 OF 105	USPATFULL on STN
TI	Lipid carrier compositions with enhanced blood stability	
L6	ANSWER 43 OF 105	USPATFULL on STN
TI	Deep water completions fracturing fluid compositions	

L6 ANSWER 44 OF 105 USPATFULL on STN  
TI Liposome loading with metal ions

L6 ANSWER 45 OF 105 USPATFULL on STN  
TI Methods of preparing gaseous precursor-filled microspheres

L6 ANSWER 46 OF 105 USPATFULL on STN  
TI Methods of imaging and treatment with targeted compositions

L6 ANSWER 47 OF 105 CAPLUS COPYRIGHT 2007 ACS on STN DUPLICATE 15  
TI The inhibition of tetrahydrofuran clathrate-hydrate formation with antifreeze protein

L6 ANSWER 48 OF 105 USPATFULL on STN DUPLICATE 16  
TI Comonomer compositions for production of imide-containing polyamino acids

L6 ANSWER 49 OF 105 USPATFULL on STN  
TI Novel targeted compositions for diagnostic and therapeutic use

L6 ANSWER 50 OF 105 USPATFULL on STN  
TI Ultrasound imaging and treatment

L6 ANSWER 51 OF 105 USPATFULL on STN  
TI Method of preparing gas and gaseous precursor-filled microspheres

L6 ANSWER 52 OF 105 USPATFULL on STN  
TI Starch-containing lubricant systems for oil field applications

L6 ANSWER 53 OF 105 USPATFULL on STN  
TI Method of magnetic resonance focused surgical and therapeutic ultrasound

L6 ANSWER 54 OF 105 USPATFULL on STN  
TI Amines useful in inhibiting gas hydrate formation

L6 ANSWER 55 OF 105 USPATFULL on STN  
TI Therapeutic delivery systems

L6 ANSWER 56 OF 105 USPATFULL on STN  
TI Silicon amphiphilic compounds and the use thereof

L6 ANSWER 57 OF 105 USPATFULL on STN  
TI Blast resistant and blast directing assemblies

L6 ANSWER 58 OF 105 USPATFULL on STN  
TI Hydrogel compositions for controlled delivery of virus vectors and methods of use thereof

L6 ANSWER 59 OF 105 USPATFULL on STN  
TI Gas filled microspheres as magnetic resonance imaging contrast agents

L6 ANSWER 60 OF 105 USPATFULL on STN  
TI Dehydration plant

L6 ANSWER 61 OF 105 USPATFULL on STN  
TI Methods for ultrasound imaging involving the use of a contrast agent and multiple images and processing of same

L6 ANSWER 62 OF 105 USPATFULL on STN  
TI Liposome-assisted synthesis of polymeric nanoparticles

L6 ANSWER 63 OF 105 USPATFULL on STN  
TI Lipid-modified insulin incorporated liposomes for selectively delivering cytotoxic agents to hepatoma cells

L6 ANSWER 64 OF 105 USPATFULL on STN  
TI Targeted contrast agents for diagnostic and therapeutic use

L6 ANSWER 65 OF 105 USPATFULL on STN  
TI Method of computed tomography using fluorinated gas-filled lipid microspheres as contrast agents

L6 ANSWER 66 OF 105 USPATFULL on STN  
TI Method of magnetic resonance focused surgical and therapeutic ultrasound

L6 ANSWER 67 OF 105 USPATFULL on STN  
TI Targeted gas and gaseous precursor-filled liposomes

L6 ANSWER 68 OF 105 USPATFULL on STN  
TI Liposomal phosphodiester, phosphorothioate, and p-ethoxy oligonucleotides

L6 ANSWER 69 OF 105 CAPLUS COPYRIGHT 2007 ACS on STN DUPLICATE 17  
TI Liposome comprising a polypeptide in which peptide antigens obtained from different virus origins are linked consecutively

L6 ANSWER 70 OF 105 USPATFULL on STN  
TI Frozen ultrasonic gas suspensions

L6 ANSWER 71 OF 105 USPATFULL on STN  
TI Methods of preparing gas-filled liposomes

L6 ANSWER 72 OF 105 USPATFULL on STN  
TI Gaseous precursor filled microspheres as magnetic resonance imaging contrast agents

L6 ANSWER 73 OF 105 USPATFULL on STN  
TI Method for inhibiting the plugging of conduits by gas hydrates

L6 ANSWER 74 OF 105 USPATFULL on STN  
TI Methods of computed tomography using perfluorocarbon gaseous filled microspheres as contrast agents

L6 ANSWER 75 OF 105 USPATFULL on STN  
TI Liposomal phosphodiester, phosphorothioate, and P-ethoxy oligonucleotides

L6 ANSWER 76 OF 105 USPATFULL on STN  
TI Methods of preparing gas and gaseous precursor-filled microspheres

L6 ANSWER 77 OF 105 USPATFULL on STN  
TI Method of storing frozen microbubble suspensions

L6 ANSWER 78 OF 105 USPATFULL on STN  
TI Method of echographic imaging using frozen gasbubble suspensions

L6 ANSWER 79 OF 105 USPATFULL on STN  
TI Polyethylene glycol modified ceramide lipids and liposome uses thereof

L6 ANSWER 80 OF 105 USPATFULL on STN  
TI Compositions for the introduction of polyanionic materials into cells

L6 ANSWER 81 OF 105 USPATFULL on STN  
TI Therapeutic drug delivery systems

L6 ANSWER 82 OF 105 USPATFULL on STN  
TI Compositions for the introduction of polyanionic materials into cells

L6 ANSWER 83 OF 105 USPATFULL on STN

TI Gas and gaseous precursor filled microspheres as topical and subcutaneous delivery vehicles

L6 ANSWER 84 OF 105 USPATFULL on STN

TI Method of producing high-molecular products from collagen-containing materials, and product produced by the same

L6 ANSWER 85 OF 105 USPATFULL on STN

TI Methods of preparing gas-filled liposomes

L6 ANSWER 86 OF 105 EMBASE COPYRIGHT (c) 2007 Elsevier B.V. All rights reserved on STN

TI Freeze-dried biomolecules: FT-ICR studies of the specific solvation of functional groups and clathrate formation observed by the slow evaporation of water from hydrated peptides and model compounds in the gas phase.

L6 ANSWER 87 OF 105 USPATFULL on STN

TI Method for inhibiting the plugging of conduits by gas hydrates

L6 ANSWER 88 OF 105 USPATFULL on STN

TI Method of preparing gas and gaseous precursor-filled microspheres

L6 ANSWER 89 OF 105 USPATFULL on STN

TI Therapeutic drug delivery systems

L6 ANSWER 90 OF 105 USPATFULL on STN

TI Therapeutic delivery systems related applications

L6 ANSWER 91 OF 105 SCISEARCH COPYRIGHT (c) 2007 The Thomson Corporation on STN DUPLICATE 18

TI Anhydrobiosis and cold tolerance in tardigrades

L6 ANSWER 92 OF 105 USPATFULL on STN

TI Methods of preparing gas-filled liposomes

L6 ANSWER 93 OF 105 USPATFULL on STN

TI Method for inhibiting the plugging of conduits by gas hydrates

L6 ANSWER 94 OF 105 USPATFULL on STN

TI Use of hydrate formation to control membrane mimetic systems

L6 ANSWER 95 OF 105 USPATFULL on STN

TI Composition for targeting, storing and loading of liposomes

L6 ANSWER 96 OF 105 USPATFULL on STN

TI Freeze dry composition and method for oral administration of drugs, biologicals, nutrients and foodstuffs

L6 ANSWER 97 OF 105 USPATFULL on STN

TI Inclusion complexes of cyclodextrins by agglomeration

L6 ANSWER 98 OF 105 USPATFULL on STN

TI Novel composition for targeting, storing and loading of liposomes

L6 ANSWER 99 OF 105 USPATFULL on STN

TI Efficient method for preparation of prolonged release liposome-based drug delivery system

L6 ANSWER 100 OF 105 WPIDS COPYRIGHT 2007 THE THOMSON CORP on STN

TI Frozen confectionery prods. - comprising a mixture of water, sweetener, flavour, and nitrous oxide gas hydrate clathrate

L6 ANSWER 101 OF 105 USPATFULL on STN

TI Composition for targeting, storing and loading of liposomes

L6 ANSWER 102 OF 105 USPATFULL on STN

TI Use of hydrates for aqueous solution treatment

L6 ANSWER 103 OF 105 USPATFULL on STN

TI Foraminous mat products

L6 ANSWER 104 OF 105 USPATFULL on STN

TI Controlled humidity freeze drying process

L6 ANSWER 105 OF 105 USPATFULL on STN

TI Soybean process

=> d ibib abs 16 1 5 11-14 17 25 39 40 47 73 86 87 93

L6 ANSWER 1 OF 105 USPATFULL on STN

ACCESSION NUMBER: 2007:15189 USPATFULL

TITLE: Environmentally benign anti-icing or deicing fluids

INVENTOR(S): Sapienza, Richard, Shoreham, NY, UNITED STATES  
Johnson, Axel, North Babylon, NY, UNITED STATES  
Ricks, William, Westerville, OH, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2007012896	A1	20070118
APPLICATION INFO.:	US 2006-522690	A1	20060918 (11)
RELATED APPLN. INFO.:	Continuation of Ser. No. US 2005-103753, filed on 12 Apr 2005, GRANTED, Pat. No. US 7138071		
	Continuation-in-part of Ser. No. US 2000-675495, filed on 29 Sep 2000, GRANTED, Pat. No. US 6506318		
	Continuation-in-part of Ser. No. US 1999-436811, filed on 9 Nov 1999, GRANTED, Pat. No. US 6129857		
	Continuation of Ser. No. US 1998-161865, filed on 28 Sep 1998, GRANTED, Pat. No. US 5980774		
	Continuation-in-part of Ser. No. US 1997-940936, filed on 30 Sep 1997, GRANTED, Pat. No. US 5876621		
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	APPLICATION		
LEGAL REPRESENTATIVE:	HEDMAN & COSTIGAN P.C., 1185 AVENUE OF THE AMERICAS, NEW YORK, NY, 10036, US		
NUMBER OF CLAIMS:	5		
EXEMPLARY CLAIM:	1-45		
LINE COUNT:	968		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Deicing compositions comprised of hydroxyl-containing organic compounds and/or organic acid salts are disclosed.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 5 OF 105 USPATFULL on STN

ACCESSION NUMBER: 2006:137717 USPATFULL

TITLE: Shale Inhibition additive for oil/gas down hole fluids and methods for making and using same

INVENTOR(S): Kippie, David P., San Antonio, TX, UNITED STATES  
Gatlin, Larry W., San Antonio, TX, UNITED STATES

PATENT ASSIGNEE(S): CLEARWATER INTERNATIONAL, L.L.C. (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2006116296	A1	20060601
APPLICATION INFO.:	US 2004-999796	A1	20041129 (10)
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	APPLICATION		

LEGAL REPRESENTATIVE: ROBERT W STROZIER, P.L.L.C, PO BOX 429, BELLAIRE, TX,  
77402-0429, US

NUMBER OF CLAIMS: 62

EXEMPLARY CLAIM: 1

LINE COUNT: 3087

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB An under-balanced drilling fluid additive is disclosed which reduces reactive shale and/or clay swelling during under-balanced drilling operations, where the additive includes an effective amount of a choline salt. A method for under-balanced drilling is also disclosed including the step of circulating a drilling fluid including an effective amount of a choline salt to reduce reactive shale and/or clay swelling during under-balanced drilling operations.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 11 OF 105 CAPLUS COPYRIGHT 2007 ACS on STN DUPLICATE 1

ACCESSION NUMBER: 2006:887124 CAPLUS

DOCUMENT NUMBER: 145:232759

TITLE: Effect of antifreeze protein on nucleation, growth and memory of gas hydrates

AUTHOR(S): Zeng, Huang; Moudrakovski, Igor L.; Ripmeester, John A.; Walker, Virginia K.

CORPORATE SOURCE: Steacie Institute for Molecular Sciences, National Research Council of Canada, Ottawa, ON, K1A 0R6, Can.

SOURCE: AIChE Journal (2006), 52(9), 3304-3309

CODEN: AICEAC; ISSN: 0001-1541

PUBLISHER: John Wiley & Sons, Inc.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The effect of Type I antifreeze protein (AFP) from winter flounder on the formation of propane hydrate and methane hydrate was studied. We show that the formation of both hydrates is inhibited significantly, with both nucleation and crystal growth being affected. Also, AFP showed the so-far unique ability to eliminate the "memory effect" in the reformation of gas hydrate. We have proposed a mechanism involving the interference of AFP with heterogeneous nucleation and subsequent growth of the hydrates. A number of samples must be studied to obtain meaningful statistics, and that magnetic resonance imaging provides a novel way of studying the nucleation and growth of hydrate in multiple droplets.

REFERENCE COUNT: 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 12 OF 105 CAPLUS COPYRIGHT 2007 ACS on STN DUPLICATE 2

ACCESSION NUMBER: 2006:130827 CAPLUS

DOCUMENT NUMBER: 144:228161

TITLE: Effect of Antifreeze Proteins on the Nucleation, Growth, and the Memory Effect during Tetrahydrofuran Clathrate Hydrate Formation

AUTHOR(S): Zeng, Huang; Wilson, Lee D.; Walker, Virginia K.; Ripmeester, John A.

CORPORATE SOURCE: Department of Biology, Queen's University, Kingston, ON, K7L 3N6, Can.

SOURCE: Journal of the American Chemical Society (2006), 128(9), 2844-2850

CODEN: JACSAT; ISSN: 0002-7863

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The inhibition activities of two antifreeze proteins (AFPs) on the formation of THF (THF) clathrate hydrate have been tested. AFPs from fish (wfAFP) and insect (CfAFP) changed the

morphol. of growing THF hydrate crystals. Also, both AFPs showed higher activities in inhibiting the formation of THF hydrate than a com. kinetic inhibitor, poly(vinylpyrrolidone) (PVP). Strikingly, both AFPs also showed the ability to eliminate the "memory effect" in which the crystallization of hydrate occurs more quickly after the initial formation. This is the first report of mols. that can inhibit the memory effect. Since the homogeneous nucleation temperature for THF hydrate was measured to be 237 K, close to that observed for ice itself, the action of kinetic inhibitors must involve heterogeneous nucleation. On the basis of our results, we postulate a mechanism for heterogeneous nucleation, the memory effect and its elimination by antifreeze proteins.

REFERENCE COUNT: 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 13 OF 105 USPATFULL on STN DUPLICATE 3  
 ACCESSION NUMBER: 2005:206529 USPATFULL  
 TITLE: Environmentally benign anti-icing or deicing fluids  
 INVENTOR(S): Sapienza, Richard, Shoreham, NY, UNITED STATES  
 Johnson, Axel, North Babylon, NY, UNITED STATES  
 Ricks, William, Westerville, OH, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2005179000	A1	20050818
	US 7138071	B2	20061121
APPLICATION INFO.:	US 2005-103753	A1	20050412 (11)
RELATED APPLN. INFO.:	Continuation of Ser. No. US 2003-341540, filed on 13 Jan 2003, ABANDONED Continuation-in-part of Ser. No. US 2000-675495, filed on 29 Sep 2000, GRANTED, Pat. No. US 6506318 Continuation-in-part of Ser. No. US 1999-436811, filed on 9 Nov 1999, GRANTED, Pat. No. US 6129857 Continuation of Ser. No. US 1998-161865, filed on 28 Sep 1998, GRANTED, Pat. No. US 5980774 Continuation-in-part of Ser. No. US 1997-940936, filed on 30 Sep 1997, GRANTED, Pat. No. US 5876621		
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	APPLICATION		
LEGAL REPRESENTATIVE:	HEDMAN & COSTIGAN P.C., 1185 AVENUE OF THE AMERICAS, NEW YORK, NY, 10036, US		
NUMBER OF CLAIMS:	29		
EXEMPLARY CLAIM:	1-33		
LINE COUNT:	1032		
CAS INDEXING IS AVAILABLE FOR THIS PATENT.			
AB	Deicing compositions comprised of hydroxyl-containing organic compounds and/or organic acid salts are disclosed.		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 14 OF 105 USPATFULL on STN DUPLICATE 4  
 ACCESSION NUMBER: 2005:186726 USPATFULL  
 TITLE: Antifreeze proteins for inhibition of clathrate hydrate formation and reformation  
 INVENTOR(S): Walker, Virginia K, Ontario, CANADA  
 Ripmeester, John A, Ontario, CANADA  
 Zeng, Huang, Ontario, CANADA

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2005161631	A1	20050728
APPLICATION INFO.:	US 2003-510557	A1	20030411 (10)
	WO 2003-CA528		20030411

NUMBER	DATE
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PRIORITY INFORMATION: US 2002-372522P 20020412 (60)  
DOCUMENT TYPE: Utility  
FILE SEGMENT: APPLICATION  
LEGAL REPRESENTATIVE: LICATLA & TYRRELL P.C., 66 E. MAIN STREET, MARLTON, NJ,  
08053, US  
NUMBER OF CLAIMS: 20  
EXEMPLARY CLAIM: 1  
LINE COUNT: 896

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Antifreeze proteins, active fragments of these  
antifreeze proteins and mimetics thereof for use in  
inhibiting clathrate hydrate formation and  
reformation and designing and selecting inhibitors of clathrate  
hydrate formation and reformation are provided.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 17 OF 105 USPATFULL on STN DUPLICATE 7  
ACCESSION NUMBER: 2005:96183 USPATFULL  
TITLE: Well drilling method and drilling fluid  
INVENTOR(S): Grainger, Neil, Cleveland, UNITED KINGDOM  
Herzhaft, Benjamin, Suresnes, FRANCE  
White, Mark, North Yorkshire, UNITED KINGDOM  
Audibert Hayet, Annie, Croissy Sur Seine, FRANCE

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2005082090	A1	20050421
	US 7055628	B2	20060606
APPLICATION INFO.:	US 2003-493407	A1	20021014 (10)
	WO 2002-FR3497		20021014

	NUMBER	DATE
PRIORITY INFORMATION:	GB 2001-25685	20011026
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	Millen White Zelano & Branigan, Arlington Courthouse Plaza I, 2200 Clarendon Blvd, Suite 1400, Arlington, VA, 22201, US	
NUMBER OF CLAIMS:	17	
EXEMPLARY CLAIM:	1	
LINE COUNT:	903	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention relates to a well drilling method consisting in removing  
the drilling cuttings using an aqueous drilling fluid such as a foam  
including a foaming agent which is, or includes, at least one  
mono-(aliphatic hydrocarbyl) phosphate ester. More specifically, the  
drilling fluid takes the form of a potassium and/or alkanolamine and/or  
alkylalkanolamine salt, said foam also comprising a foam stabiliser.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 25 OF 105 CAPLUS COPYRIGHT 2007 ACS on STN  
ACCESSION NUMBER: 2005:1161714 CAPLUS  
DOCUMENT NUMBER: 144:391374  
TITLE: Inhibition of clathrate hydrates  
by antifreeze proteins  
AUTHOR(S): Zeng, Huang  
CORPORATE SOURCE: Queen's Univ., Kingston, ON, Can.  
SOURCE: (2004) 150 pp. Avail.: UMI, Order No. DANR00011  
From: Diss. Abstr. Int., B 2005, 66(2), 735  
DOCUMENT TYPE: Dissertation  
LANGUAGE: English

AB Unavailable

L6 ANSWER 39 OF 105 CAPLUS COPYRIGHT 2007 ACS on STN DUPLICATE 14

ACCESSION NUMBER: 2003:837353 CAPLUS

DOCUMENT NUMBER: 139:325775

TITLE: Use of antifreeze proteins for  
inhibition of clathrate hydrate  
formation and reformation

INVENTOR(S): Walker, Virginia K.; Ripmeester, John A.; Zeng, Huang

PATENT ASSIGNEE(S): Queen's University at Kingston, Can.

SOURCE: PCT Int. Appl., 35 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003087532	A1	20031023	WO 2003-CA528	20030411
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
CA 2496631	A1	20031023	CA 2003-2496631	20030411
AU 2003227152	A1	20031027	AU 2003-227152	20030411
US 2005161631	A1	20050728	US 2003-510557	20030411
PRIORITY APPLN. INFO.:			US 2002-372522P	P 20020412
			WO 2003-CA528	W 20030411

AB Antifreeze proteins, active fragments of these  
antifreeze proteins and mimetics thereof for use in  
inhibiting clathrate hydrate formation and reformation  
and designing and selecting inhibitors of clathrate  
hydrate formation and reformation are provided.

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 40 OF 105 USPATFULL on STN

ACCESSION NUMBER: 2003:242223 USPATFULL

TITLE: Environmentally benign anti-icing or deicing fluids

INVENTOR(S): Sapienza, Richard, Shoreham, NY, UNITED STATES

Johnson, Axel, North Babylon, NY, UNITED STATES

Ricks, William, Westerville, OH, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2003168625	A1	20030911
APPLICATION INFO.:	US 2003-341540	A1	20030113 (10)
RELATED APPLN. INFO.:	Continuation-in-part of Ser. No. US 2000-675495, filed on 29 Sep 2000, GRANTED, Pat. No. US 6506318 Continuation-in-part of Ser. No. US 1999-436811, filed on 9 Nov 1999, GRANTED, Pat. No. US 6129857 Continuation of Ser. No. US 1998-161865, filed on 28 Sep 1998, GRANTED, Pat. No. US 5980774 Continuation-in-part of Ser. No. US 1997-940936, filed on 30 Sep 1997, GRANTED, Pat. No. US 5876621		
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	APPLICATION		
LEGAL REPRESENTATIVE:	Alan B. Clement, Esq., HEDMAN & COSTIGAN, P.C., 1185		

Avenue of the Americas, New York, NY, 10036  
NUMBER OF CLAIMS: 45  
EXEMPLARY CLAIM: 1  
LINE COUNT: 1156  
CAS INDEXING IS AVAILABLE FOR THIS PATENT.  
AB Deicing compositions comprised of hydroxyl-containing organic compounds  
and/or organic acid salts are disclosed.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 47 OF 105 CAPLUS COPYRIGHT 2007 ACS on STN DUPLICATE 15  
ACCESSION NUMBER: 2003:489829 CAPLUS  
DOCUMENT NUMBER: 139:247655  
TITLE: The inhibition of tetrahydrofuran clathrate-  
hydrate formation with antifreeze  
protein  
AUTHOR(S): Zeng, Huang; Wilson, Lee D.; Walker, Virginia K.;  
Ripmeester, John A.  
CORPORATE SOURCE: Steacie Institute for Molecular Sciences, National  
Research Council, Ottawa, ON, K1A 0R6, Can.  
SOURCE: Canadian Journal of Physics (2003), 81(1/2), 17-24  
CODEN: CJPHAD; ISSN: 0008-4204  
PUBLISHER: National Research Council of Canada  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
AB The effect of Type I fish antifreeze protein (AFP)  
from the winter flounder, *Pleuronectes americanus* (Walbaum), (WfAFP) on  
the formation of THF clathrate hydrate was studied by  
observing changes in THF crystal morphol. and determining the induction time  
for  
nucleation. AFP retarded THF clathrate-hydrate growth at the tested  
temps. and modified the THF clathrate hydrate crystal morphol. from  
octahedral to plate-like. AFP appears to be even more effective than the  
kinetic inhibitor, polyvinylpyrrolidone. Recombinant AFP from an insect,  
a spruce budworm, *Choristoneura fumiferana*, moth, (Cf) was also tested for  
inhibition activity by observation of the THF hydrate crystal-growth  
habit. Like WfAFP, CfAFP appeared to show adsorption on multiple THF  
hydrate crystal faces. A protein with no antifreeze  
activity, cytochrome C, was used as a control and it neither changed the  
morphol. of the THF clathrate-hydrate crystals, nor  
retarded the formation of the hydrate. Preliminary expts. on  
the inhibition activity of WfAFP on a natural gas hydrate assessed  
induction time and the amount of propane gas consumed. Similar to the  
observations for THF, the data indicated that WfAFP inhibited propane  
hydrate growth. Taken together, these results support our hypothesis that  
AFP can inhibit clathrate hydrate growth and as well, offer promise for  
the understanding of the inhibition mechanism.  
REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 73 OF 105 USPATFULL on STN  
ACCESSION NUMBER: 1999:30252 USPATFULL  
TITLE: Method for inhibiting the plugging of conduits by gas  
hydrates  
INVENTOR(S): Klomp, Ulfert Cornelis, Amsterdam, Netherlands  
Reijnhart, Rene, Amsterdam, Netherlands  
PATENT ASSIGNEE(S): Shell Oil Company, Houston, TX, United States (U.S.  
corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5879561		19990309
APPLICATION INFO.:	US 1996-636618		19960423 (8)

NUMBER	DATE
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PRIORITY INFORMATION: EP 1995-201067 19950425  
DOCUMENT TYPE: Utility  
FILE SEGMENT: Granted  
PRIMARY EXAMINER: Hruskoci, Peter A.  
NUMBER OF CLAIMS: 18  
EXEMPLARY CLAIM: 1  
LINE COUNT: 509

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A method for inhibiting the plugging of a conduit, the conduit containing a flowing mixture comprising an amount of hydrocarbons having from one to eight carbon atoms and an amount of water wherein the amounts of hydrocarbons and water could form hydrates at conduit temperatures and pressures, the method comprising the steps of:

adding to the mixture an amount of a hydrate formation inhibitor component of the formula ##STR1## wherein two of R.sub.1 -R.sub.4 are independently normal or branched alkyls having 4 or 5 carbon atoms,

two of R.sub.1 -R.sub.4 are independently representing organic moieties having at least 8 carbon atoms,

A represents a nitrogen or phosphorus atom, and

Y represents an anion;

the amount of the hydrate formation inhibitor component being effective to inhibit formation of hydrates in the mixture at conduit temperatures and pressures; and

flowing the mixture containing the hydrate formation inhibitor component through the conduit.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 86 OF 105 EMBASE COPYRIGHT (c) 2007 Elsevier B.V. All rights reserved on STN

ACCESSION NUMBER: 1998404674 EMBASE

TITLE: Freeze-dried biomolecules: FT-ICR studies of the specific solvation of functional groups and clathrate formation observed by the slow evaporation of water from hydrated peptides and model compounds in the gas phase.

AUTHOR: Lee S.-W.; Freivogel P.; Schindler T.; Beauchamp J.L.

CORPORATE SOURCE: J.L. Beauchamp, Beckman Institute, California Institute of Technology, Pasadena, CA 91125, United States

SOURCE: Journal of the American Chemical Society, (18 Nov 1998)  
Vol. 120, No. 45, pp. 11758-11765. .  
ISSN: 0002-7863 CODEN: JACSAT

COUNTRY: United States

DOCUMENT TYPE: Journal; Article

FILE SEGMENT: 029 Clinical Biochemistry

LANGUAGE: English

SUMMARY LANGUAGE: English

ENTRY DATE: Entered STN: 10 Jan 1999

Last Updated on STN: 10 Jan 1999

AB Solvents evaporation from extensively hydrated peptides and selected model compounds formed by electrospray ionization has been examined using an external ion source Fourier transform ion cyclotron resonance (FT-ICR) mass spectrometer. Water evaporation from the clusters, formed at room temperature by appropriate operation of an electrospray ion source, is initially rapid and results in evaporative cooling of the clusters to a temperature around 130-150 K, determined by the balance between evaporative cooling and heating by background blackbody radiation. In this 'freeze-drying' process, it is observed that the kinetics of solvent

evaporation and the cluster size distributions are highly dependent on the nature of the core ion in the cluster. In agreement with earlier studies of the hydrated proton, pure water clusters exhibit special stability characteristic of clathrate formation where, for example, a hydronium ion is encapsulated by a pentagonal dodecahedron of twenty water molecules. Similar clustering of water occurs around protonated primary alkylamines where the protonated amine replaces one of the water molecules in the clathrate structures, which encapsulate one or more neutral water molecules. This observation supports the conjecture that the doubly protonated cyclic decapeptide gramicidin S with 40 water molecules attached, the most significant magic number observed in mass spectra at various delay times, has both protonated ornithine residues solvated by pentagonal dodecahedron clathrate structures. Other peptides such as doubly protonated bradykinin do not exhibit any specific solvation during the freeze-drying process. Studies of model compounds are presented which reveal other interesting aspects of water structure around singly and multiply charged ions with low extents of hydration, including the observation of neutral clathrates attached to a 'spectator' ion.

L6 ANSWER 87 OF 105 USPATFULL on STN

ACCESSION NUMBER: 97:61902 USPATFULL

TITLE: Method for inhibiting the plugging of conduits by gas hydrates

INVENTOR(S): Klomp, Ulfert Cornelis, Amsterdam, Netherlands  
Kruka, Vitold Raimond, Houston, TX, United States  
Reijnhart, Rene, Amsterdam, Netherlands  
Weisenborn, Anton Jacobus, Amsterdam, Netherlands

PATENT ASSIGNEE(S): Shell Oil Company, Houston, TX, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5648575		19970715
APPLICATION INFO.:	US 1995-370954		19950110 (8)
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	Granted		
PRIMARY EXAMINER:	Caldarola, Glenn A.		
ASSISTANT EXAMINER:	Wood, Elizabeth D.		
LEGAL REPRESENTATIVE:	Christensen, Del S.		
NUMBER OF CLAIMS:	28		
EXEMPLARY CLAIM:	1		
LINE COUNT:	713		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The plugging of conduits containing a mixture of low-boiling hydrocarbons and water is inhibited by adding to the mixture an effective amount of at least one alkylated compound of the general formula  $\text{R.sub.1}$  wherein R.sub.1 and R.sub.2 each are independently chosen from normal or branched alkyls containing a chain of at least 4 carbon atoms,

R.sub.5 is an organic moiety containing a chain of at least 4 atoms,

X is S, N--R.sub.4 or P--R.sub.4,

R.sub.4 is H or an organic substituent, suitably an alkyl or alkenyl group having from 8 to 20 carbon atoms, and

Y-- is an anion.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 93 OF 105 USPATFULL on STN

ACCESSION NUMBER: 95:94597 USPATFULL

TITLE: Method for inhibiting the plugging of conduits by gas hydrates

INVENTOR(S): Klomp, Ulfert C., Amsterdam, Netherlands  
Kruka, Vitold R., Houston, TX, United States  
Reijnhart, Rene, Amsterdam, Netherlands  
Weisenborn, Anton J., Amsterdam, Netherlands  
PATENT ASSIGNEE(S): Shell Oil Company, Houston, TX, United States (U.S.  
corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5460728		19951024
APPLICATION INFO.:	US 1993-171544		19931221 (8)
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	Granted		
PRIMARY EXAMINER:	McCarthy, Neil		
NUMBER OF CLAIMS:	14		
EXEMPLARY CLAIM:	1		
NUMBER OF DRAWINGS:	5 Drawing Figure(s); 1 Drawing Page(s)		
LINE COUNT:	608		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A method is provided for inhibiting the formation of hydrates in streams containing low-boiling hydrocarbons and water. The method includes adding to the stream a component of the formula: ##STR1## wherein R.sub.1, R.sub.2, and R.sub.3 are independently chosen from the group consisting of normal and branched alkyls having at least 4 carbon atoms, and X is N--R.sub.4, wherein R.sub.4 is selected from the group consisting of hydrogen and organic substituents and

Y.sup.- is an anion. The amount added is an amount that is effective to inhibit formation of hydrates in the mixture at conduit temperatures and pressures. The preferred R.sub.4 is an alkyl or alkenyl having from eight to twenty carbons, and the preferred R.sub.1, R.sub.2, and R.sub.3 are alkyls having four to six carbon atoms.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

=> d kwic 16 87 73 40 13 1 17

L6 ANSWER 87 OF 105 USPATFULL on STN

SUMM It has been known for a long time, that gas hydrate crystals, when allowed to form and grow inside a conduit such as a pipeline, tend to block or even damage. . . possible in principle: removal of free water; maintaining elevated temperatures; and/or reduced pressures or the addition of melting point depressants (antifreezes). In practice, antifreezes are most frequently used. However, antifreezes, such as the lower alcohols and glycols, have to be added in substantial amounts to be effective, typically several tens of percent by weight of the water present. A disadvantage of such amounts is the cost of the antifreeze, and that recovery is relatively expensive.

SUMM Plants and poikilothermic animals such as insects and cold-water fish are known to protect themselves from freezing, both by antifreezes such as glycols and by special peptides and glycopeptides (termed antifreeze proteins and antifreeze glycoproteins) that interfere with ice crystal growth (A. L. de Vries, Comp. Blochem. Physiol, 73, 627 (1982)). The present applicants found such cold-water fish peptides and glycopeptides also to be effective in interfering with the growth of gas-hydrate crystals. However, their production and use for this purpose are currently considered to be uneconomical.

L6 ANSWER 73 OF 105 USPATFULL on STN

SUMM It has been known for a long time, that gas hydrate crystals, when allowed to form and grow inside a conduit such as a

pipeline, tend to block or even damage. . . possible in principle: removal of free water; maintaining elevated temperatures and/or reduced pressures or the addition of melting point depressants (antifreezes). In practice, antifreezes are most frequently used. However, antifreezes, such as the lower alcohols and glycols, have to be added in substantial amounts to be effective, typically several tens of percent by weight of the water present. A disadvantage of such amounts is the cost of the antifreeze. A further disadvantage is that recovery is relatively expensive.

SUMM Plants and poikilothermic animals such as insects and cold-water fish are known to protect themselves from freezing; both by antifreezes such as glycols and by special peptides and glycopeptides (termed antifreeze proteins and antifreeze glycoproteins) that interfere with ice crystal growth (A.L. de Vries, Comp. Biochem. Physiol, 73, 627 (1982)). Although we found such cold-water fish peptides and glycopeptides to be effective in interfering with the growth of gas-hydrate crystals, their production and use for this purpose are currently considered to be uneconomical.

L6 ANSWER 40 OF 105 USPATFULL on STN

SUMM [0028] In still further embodiments, the compositions of the present invention are useful to prevent freezing or de-freezing in a wide variety of other applications. An example is that the compositions of the present invention can be used in drilling fluids used to break-up (melt) frozen gas hydrates.

DETD . . . having the following approximate composition:

COMPONENT GROUPS	% BY WEIGHT	% ON DRY SUBSTANCE
Dissolved Solids (RDS)	74.84	--
Ash	22.81	30.47
Crude Protein	19.44	25.97
Nitrogen Compounds (As N)	3.11	4.16
α-Amino Nitrogen	0.41	0.55
Compounds (As N)		
INDIVIDUAL COMPOUNDS		
Sucrose	13.13	17.54
Raffinose	3.96	5.29
Invert	0.020	0.027
Betaine	8.95	
DETD . . . approx.		
Sucrose	26.5% on DS approx.	
Raffinose	5.0% on DS approx.	
Nitrogen Compound (as N)	3.5% on DS approx.	
Crude Protein	22.0% on DS approx.	
Betaine	8.5% on DS approx.	
Amino Acids	0.5% on DS approx.	
Ash	30.0% on DS approx.	

L6 ANSWER 13 OF 105 USPATFULL on STN

DUPLICATE 3

SUMM In still further embodiments, the compositions of the present invention are useful to prevent freezing or de-freezing in a wide variety of other applications. An example is that the compositions of the present invention can be used in drilling fluids used to break-up (melt) frozen gas hydrates.

DETD . . . the following approximate composition:

% BY

% ON DRY

	WEIGHT	SUBSTANCE
COMPONENT GROUPS		
Dissolved Solids (RDS)	74.84	--
Ash	22.81	30.47
Crude Protein	19.44	25.97
Nitrogen Compounds (As N)	3.11	4.16
α-Amino Nitrogen Compounds (As N) 0.41		0.55
INDIVIDUAL COMPOUNDS		
Sucrose	13.13	17.54
Raffinose	3.96	5.29
Invert	0.020	0.027
Betaine.		
DETD		
Sucrose	26.5% on DS approx.	
Raffinose	5.0% on DS approx.	
Nitrogen Compound (as N)	3.5% on DS approx.	
Crude Protein	22.0% on DS approx.	
Betaine	8.5% on DS approx.	
Amino Acids	0.5% on DS approx.	
Ash	30.0% on DS approx.	

CLM What is claimed is:  
 . . . claim 45 wherein said liquid comprises a fire extinguisher fluid, an engine radiator fluid, a heat transfer system fluid, a gas dehydration system fluid, a lavatory fluid, a drilling fluid, a fluid for break-up of gas hydrates or a fluid for freeze protection of plumbing lines.

L6 ANSWER 1 OF 105 USPATFULL on STN  
 SUMM In still further embodiments, the compositions of the present invention are useful to prevent freezing or de-freezing in a wide variety of other applications. An example is that the compositions of the present invention can be used in drilling fluids used to break-up (melt) frozen gas hydrates.

DETD

	% ON DRY	% BY WEIGHT	SUBSTANCE
COMPONENT GROUPS			
Dissolved Solids (RDS)	74.84	--	
Ash	22.81	30.47	
Crude Protein	19.44	25.97	
Nitrogen Compounds (As N)	3.11	4.16	
α-Amino Nitrogen Compounds (As N) 0.41		0.55	
INDIVIDUAL COMPOUNDS			
Sucrose	13.13	17.54	
Raffinose	3.96	5.29	
Invert	0.020	0.027	
Betaine	8.95.		
DETD			
Sucrose	26.5% on DS approx.		
Raffinose	5.0% on DS approx.		
Nitrogen Compound (as N)	3.5% on DS approx.		
Crude Protein	22.0% on DS approx.		
Betaine	8.5% on DS approx.		
Amino Acids	0.5% on DS approx.		
Ash	30.0% on DS approx.		



L6 ANSWER 17 OF 105 USPATFULL on STN

DUPLICATE 7

SUMM . . . . . used in amounts of from 0 to 10%, usually 2 to 3% by weight of the drilling fluid; and gas hydrate inhibitors particularly for low temperature drilling, such as polyvinyl pyrrolidone and similar polymers, quaternary ammonium salts or anti-freeze fish proteins, typically used in amounts of from 0 to 20%, usually 2 to 5% by weight of the drilling fluid.

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=> d his full

(FILE 'HOME' ENTERED AT 13:04:59 ON 20 MAR 2007)

INDEX 'ADISCTI, ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, ANTE, AQUALINE, AQUASCI, BIOENG, BIOSIS, BIOTECHABS, BIOTECHDS, BIOTECHNO, CABA, CAPLUS, CEABA-VTB, CIN, CONFSCI, CROPB, CROPU, DDFB, DDFU, DGENE, DISSABS, DRUGB, DRUGMONOG2, DRUGU, EMBAL, EMBASE, ...' ENTERED AT 13:05:22 ON 20 MAR 2007  
SEA (CLATHRAT?(S)HYDRAT?) OR (GAS?(S)HYDRATE?)

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4 FILE ADISCTI  
3 FILE ADISINSIGHT  
11 FILE ADISNEWS  
54 FILE AGRICOLA  
103 FILE ANABSTR  
129 FILE ANTE  
45 FILE AQUALINE  
804 FILE AQUASCI  
57 FILE BIOENG  
375 FILE BIOSIS  
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67 FILE BIOTECHDS  
82 FILE BIOTECHNO  
180 FILE CABA  
9387 FILE CAPLUS  
483 FILE CEABA-VTB  
70 FILE CIN  
481 FILE CONFSCI  
2 FILE CROPB  
4 FILE CROPU  
64 FILE DDFB  
79 FILE DDFU  
110 FILE DGENE  
282 FILE DISSABS  
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1123 FILE JICST-EPLUS  
2 FILE KOSMET  
140 FILE LIFESCI  
304 FILE MEDLINE  
656 FILE NTIS  
400 FILE OCEAN  
2601 FILE PASCAL  
1 FILE PHAR  
2 FILE PHARMAML

5 FILE PHIN  
 728 FILE PROMT  
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 3212 FILE SCISEARCH  
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 11086 FILE USPATFULL  
 1308 FILE USPAT2  
 11 FILE VETB  
 24 FILE VETU  
 123 FILE WATER  
 4473 FILE WPIDS  
 31 FILE WPIFV  
 4473 FILE WPINDEX  
 31 FILE IPA  
 358 FILE NLDB

L1 QUE (CLATHRAT?(S) HYDRAT?) OR (GAS?(S) HYDRATE?)

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 D RANK

FILE 'USPATFULL, CAPLUS, WPIDS, SCISEARCH, PASCAL, IFIPAT, USPAT2, JICST-EPLUS, TOXCENTER, AQUASCI, PROMT, ESBIOBASE, OCEAN, BIOSIS, NLDB, EMBASE, MEDLINE' ENTERED AT 13:11:48 ON 20 MAR 2007

L2 39907 SEA (CLATHRAT?(S) HYDRAT?) OR (GAS?(S) HYDRATE?)

L3 941 SEA L2 (S) (FREEZ? OR ANTIFREE?)

L4 34 SEA L3 (S) (PROTEI? OR POLYPEPT?)

L5 129 SEA L3 AND (PROTEI? OR POLYPEPT?)

L6 105 DUP REM L5 (24 DUPLICATES REMOVED)

D TI L6 1-105

D IBIB ABS L6 1 5 11-14 17 25 39 40 47 73 86 87 93

D KWIC L6 87 73 40 13 1 17

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FILE USPATFULL

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